WHAT IS CLAIMED IS:

1. A liquid crystal display device comprising:

a first insulating substrate and a second substrate being disposed so that respective main surfaces thereof are opposite to one another;

a liquid crystal layer being interposed between the first and second insulating substrates;

gate wiring lines being formed on the first insulating substrate and transmitting scanning signals;

a gate insulating film being composed of the first insulating substrate and the gate wiring lines;

drain wiring lines being composed of metal films formed on the gate insulating film and transmitting video signals;

semiconductor layers being formed on the gate insulating film and at least under the drain wiring lines;

thin film transistor sections, each of which has a semiconductor channel layer composed of a part of the semiconductor layer located at least over a part of the gate wiring layer, a drain electrode composed of a part of the drain wiring line located on the semiconductor channel layer and a semiconductor contacting layer formed of a part of the semiconductor layer being contacted with the part of the drain wiring lines, a source electrode composed of another metal film formed on the semiconductor channel layer to be spaced from and opposite to the drain electrode and another semiconductor contacting layer formed of another part of the semiconductor

layer being contacted with a lower surface of the another metal film, and a protective film covering the drain wiring lines, the source electrode, and the drain electrode; and

pixel electrode sections, each of which has a pixel electrode being contacted with the source electrodes, wherein

a planar pattern of each of the semiconductor layers is broader than those of the metal layers of the drain wiring layer, the source electrodes, and the drain electrodes formed thereon, and

a planar pattern of each of the semiconductor layers other than the semiconductor contacting layers formed therein is broader than those of the semiconductor contacting layers.

2. A liquid crystal display device comprising:

a first insulating substrate and a second insulating substrate disposed to be opposite to the first insulating substrate;

a liquid crystal layer being interposed between the first insulating substrate and the second insulating substrate;

a plurality of gate wiring lines, each of which is formed on the first insulating substrate and transmits a scanning signal;

a gate insulating film being formed on the first insulating substrate and the plurality of gate wiring lines;

a plurality of drain wiring lines, each of which is formed on the gate insulating film and transmits a video signal;

a plurality of semiconductor layers being formed on the gate insulating film and at least under one of the plurality of drain wiring lines;

thin film transistor sections, each of which has a semiconductor channel layer formed of a part of the one of the plurality of semiconductor layers extended at least over a part of one of the plurality of gate wiring lines,

a drain electrode formed of a part of the one of the plurality of drain wiring lines situated on the semiconductor channel layer,

a source electrode formed on the semiconductor channel layer at an opposite side of the part of the one of the plurality of gate wiring lines to the drain electrode to be spaced from the drain electrode;

a protective film covering the plurality of drain wiring lines, the source electrodes, and the drain electrodes;

a plurality of pixel electrodes, each of which is contacted with the source electrode of one of the thin film transistor sections; and

charges-holding capacitance sections, each of which has an upper electrode connected to one of the pixel electrode and a lower electrodes formed of the gate wiring line or a material thereof, wherein,

a dielectric film being interposed between the lower electrode and the upper electrode of each of the holding capacitance sections has a stacked layer structure formed of the gate insulating film and the semiconductor layer, and

each of the pixel electrodes is contacted with one of the semiconductor layers through a contact hole provided by perforating the protective film.

3. A liquid crystal display device according to claim 2, wherein the dielectric film interposed between the lower electrode and the upper electrode of the holding capacitance is the gate insulating film, and the pixel electrode contacts with the gate insulating film through the contact hole provided by perforating the protective film.

4. A liquid crystal display device according to claim 3, wherein the semiconductor layer is formed around the contact hole on the gate insulating film.

5. A liquid crystal display device according to claim 2, wherein the protective film of the thin film transistor is formed by stacking an inorganic material film and an organic material film.

6. A liquid crystal display device comprising:

a liquid crystal layer being interposed between a first insulating substrate and a second insulating substrate provided to be opposite to the first insulating substrate;

gate wiring lines formed on the first insulating substrate and transmitting scanning signals;

a gate insulating film formed on the first insulating substrate and the gate wiring lines;

drain wiring lines being composed of metal layers formed on the gate insulating film and transmitting video signals;

semiconductor layers, each of which is formed on the

gate insulating film and is provided at least under one of the drain wiring lines;

thin film transistor sections, each of which has a semiconductor channel layer formed of a part of one of the semiconductor layers located over a part of one of the gate wiring lines, a drain electrode formed of a part of the drain wiring lines located on the semiconductor channel layer, a source electrode being formed on the semiconductor channel layer to be opposite to and spaced from the drain electrode; a protective film being formed over at least one of the drain wiring lines, the source electrode, and the drain electrode; and

pixel sections, each of which has at least one pixel electrode being connected to the source electrode and at least one of common electrode being spaced from the at least one pixel electrode in a plane along at least one of main surfaces of the first and second insulating substrates, wherein

semiconductor contacting layers are formed in each of the semiconductor layers along respective interfaces thereof contacting metal layers of the one of the drain wiring lines, the source electrode, and the drain electrode, and

the at least one pixel electrode is formed as three layered structure having the semiconductor layer, the semiconductor contacting layer, and a metal layer of either the drain wiring line or the source electrode being stacked in this order on the gate insulating film.

7. A liquid crystal display device according to claim 6, wherein a planar pattern of the semiconductor contacting layer has a broader width than that of a planar pattern of the metal film of the pixel electrode, and a planar pattern of the semiconductor channel layer has a broader width than that of the planar pattern of the semiconductor contacting layer.

8. A liquid crystal display device according to claim 6, wherein the liquid crystal display device comprises a holding capacitance structure utilizing a common electrode wiring line formed in a same process and of a same material as those of the gate wiring lines and a transparent conductive layer connecting to the common electrode through a contact hole provided by perforating stacking layers formed of the gate insulating film and the protective film as an upper electrode thereof, the metal layer of the pixel electrode as a lower electrode thereof, and the protective film as a dielectric film thereof.

9. A liquid crystal display device according to claim 1, wherein the semiconductor channel layer is formed of non-impurity doped amorphous silicon, and the semiconductor contacting layer is formed of amorphous silicon doped with at least one element of phosphorus, antimony, and boron.

10. A liquid crystal display device according to claim 1, wherein the metal layers of the drain wiring line, the source electrode, and the drain electrode are formed of one of a group consisting of a single layer, a plurality of alloy layers, and stacked layers, each of which contain at least one element of

molybdenum, chromium, tungsten, tantalum, titanium, and aluminum.

11. A liquid crystal display device according to claim 1, wherein the pixel electrode is formed of a transparent conductive film.

12. A fabrication method for a liquid crystal display device having thin film transistor and gate terminals, comprising the steps of;

a first step for forming a first metal film on a insulating substrate, forming a first photoresist pattern on the first metal film, and shaping the first metal film into gate wiring lines and gate terminal with the first photoresist pattern as a mask;

a second step for forming an insulating film, an amorphous silicon film, an impurity-doped silicon film, and a second metal film on the insulating substrate being processed through the first step, forming a second photoresist pattern having at least two areas layer thickness of which are different from each other on the second metal film, and forming drain wiring lines, source electrode and drain electrode of the thin film transistor by etching the first metal film, the impurity-doped amorphous silicon film, and the amorphous silicon film in accordance with the second photoresist pattern as a mask, by removing a thin layered area of the second photoresist pattern by oxygen plasma, by etching the second metal layer in accordance with the remainder of the second photoresist pattern as a mask, and by etching the impurity doped

amorphous silicon in this order;

a third step for forming a protective film on the insulating substrate being processed through the second step, forming a third photoresist pattern on the protective film, and etching the protective film and the insulating film in accordance with the third photoresist pattern to expose respective part of the second metal film of the source electrodes and respective part of the first metal film of the gate wiring terminals; and

a forth step for forming a transparent conductive film on the insulating substrate being processed through the third step, forming a forth photoresist pattern on the transparent conductive film, and etching the transparent conductive film in accordance with the forth photoresist pattern as a mask.

13. A fabrication method for a liquid crystal display device according to claim 12, wherein the second photoresist pattern is exposed through a photomask having an opaque area and a semitransparent area during the second step so that the second photoresist pattern is divided into at least two areas having different thickness from each other after the exposure process and a development process applied thereto.

14. A liquid crystal display device according to claim 13, wherein the semitransparent area of the photomask is formed of a metal film or a metal oxide film being thinner than the opaque area thereof so that half-exposure is applied to the second photoresist pattern through the semitransparent area thereof.

15. A fabrication method for a liquid crystal display device according to claim 13, wherein the semitransparent area of the photomask has an opening pattern obtained by shaping an opaque film constituting the opaque area thereof into mesh-like, so that half-exposure is applied to the second photoresist pattern through the opening pattern thereof.

16. A fabrication method for a liquid crystal display device according to claim 13, wherein the second metal film is etched twice in accordance with the second photoresist pattern during the second step, a dry etching is applied to the second metal film at first, and a wet etching is applied thereto at second.

17. A fabrication method for a liquid crystal display device having thin film transistor and charge-holding capacitance, comprising the steps of;

a first step for forming a first metal film on a insulating substrate, forming a first photoresist pattern on the first metal film, and shaping the first metal film into gate wiring lines, charge-holding capacitance lines, or common electrode wiring lines of the liquid crystal display device of a in-plane-switching mode with the first photoresist pattern as a mask;

a second step for forming an insulating film, an amorphous silicon film, an impurity-doped silicon film, and a second metal film on the insulating substrate being processed through the first step, forming a second photoresist pattern on the second metal film, and forming an amorphous silicon film on the gate wiring lines, the charge-holding capacitance lines,

or the common electrode wiring lines by etching the first metal film, the impurity-doped amorphous silicon film, and the amorphous silicon film in accordance with the second photoresist pattern as a mask, by removing a thin layered area of the second photoresist pattern by oxygen plasma, by etching the second metal layer in accordance with the remainder of the second photoresist pattern as a mask, and by etching the impurity doped amorphous silicon in this order;

a third step for forming a protective film on the insulating substrate being processed through the second step, forming a third photoresist pattern on the protective film, and etching the protective film and the insulating film in accordance with the third photoresist pattern as a mask to expose respective part of the amorphous silicon film on the gate wiring lines, the charge-holding capacitance lines, or the common electrode wiring lines; and

a forth step for forming a transparent conductive film on the insulating substrate being processed through the third step, forming a forth photoresist pattern on the transparent conductive film, and etching the transparent conductive film in accordance with the forth photoresist pattern as a mask to contact the transparent conductive film to the respective part of the amorphous silicon film on the gate wiring lines, the charge-holding capacitance lines, or the common electrode wiring lines.

18. A fabrication method for a liquid crystal display device having thin film transistor and charge-holding capacitance,

comprising the steps of;

a first step for forming a first metal film on a insulating substrate, forming a first photoresist pattern on the first metal film, and shaping the first metal film into gate wiring lines, charge-holding capacitance lines, or common electrode wiring lines of the liquid crystal display device of a in-plane-switching mode with the first photoresist pattern as a mask;

a second step for forming an insulating film, an amorphous silicon film, an impurity-doped silicon film, and a second metal film on the insulating substrate being processed during the first step, forming a second photoresist pattern on the second metal film, and forming the amorphous silicon film on the gate wiring lines, the charge-holding capacitance lines, or the common electrode wiring lines by etching the first metal film, the impurity-doped amorphous silicon film, and the amorphous silicon film in accordance with the second photoresist pattern as a mask, by removing a thin layered area of the second photoresist pattern by oxygen plasma, by etching the second metal layer in accordance with the remainder of the second photoresist pattern as a mask, and by etching the impurity doped amorphous silicon in this order;

a third step for forming a protective film on the insulating substrate being processed through the second step, forming a third photoresist pattern on the protective film, etching the protective film in accordance with the third photoresist pattern as a mask, and etching the amorphous

silicon film on the gate wiring lines, the charge-holding capacitance lines, or the common electrode wiring lines to expose the insulating film by removing the amorphous silicon film; and

a forth step for forming a transparent conductive film on the insulating substrate being processed through the third step, forming a forth photoresist pattern on the transparent conductive film, and etching the transparent conductive film in accordance with the forth photoresist pattern as a mask to contact the transparent conductive film to the respective part of the insulating film on the gate wiring lines, the charge-holding capacitance lines, or the common electrode wiring lines.

19. A fabrication method for a liquid crystal display device according to claim 18, wherein the protective film is etched by a wet etching using an aqueous solution containing hydrofluoric acid or ammonium fluoride.

20. A fabrication method for a liquid crystal display device according to claim 18, wherein the protective film is formed by stacking a first protective film of an inorganic material and a second protective film of a photosensitive organic material during the third step, so that the second protective film is utilized as the third photoresist pattern.

21. A fabrication method for a liquid crystal display device according to claim 20, wherein the second protective film of the photosensitive organic material is heated from 120℃ to 300℃ after exposure and development process applied thereto

during the third step.